

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous claim listings.

Listing of Claims

1. (previously presented): An image reading apparatus, comprising:

a light source adapted to illuminate an original sheet;

an image sensor adapted to scan said original sheet and output electrical signals;

a feeder capable of successively supplying a plurality of original sheets to an original sheet scanning area of said image sensor;

a first reference member which is arranged in the original scanning area of said image sensor in a sub-scanning direction;

a second reference member which is arranged in an area other than the original sheet scanning area of said image sensor in the sub-scanning direction;

a memory adapted to store a predetermined time since said light source is turned on until a maximum of electrical signals output from said image sensor at the time said light source is turned on changes a predetermined rate;

a timer adapted to measure an on time since said light source is turned on;

and

a controller adapted to determine whether the time measured by said timer reaches the predetermined time, in a case that the predetermined time has not elapsed, control said image sensor to scan said first reference member illuminated by said light source for acquiring a coefficient for uniformly changing level of the electrical signals while said image sensor scans the plurality of original sheets which

are successively supplied by said feeder, and in a case that the predetermined time has elapsed, control said image sensor to interrupt the scanning operation of the plurality of original sheets and scan said second reference member illuminated by said light source only once for acquiring shading correction data in a main scanning direction, and then restart scanning of the remaining original sheets and scan said first reference member illuminated by said light source while said image sensor scans the remaining original sheets without scanning said second reference member.

2. (canceled)

3. (previously presented): The apparatus according to claim 1, further comprising:
a correction unit which uses the shading correction data to perform shading correction on the electrical signals output from said image sensor.

4. (original): The apparatus according to claim 1, wherein said first and second reference members comprise white plates.

5. (previously presented): The apparatus according to claim 4, wherein said first reference member is arranged at an end portion of a main scanning direction.

6. (previously presented): The apparatus according to claim 1, wherein the determination by said controller is performed before each original sheet is read.

7. (**previously presented**): The apparatus according to claim 6,

wherein said controller performs the determination in a case that said feeder supplies each original sheet to a predetermined position.

8. (**previously presented**): The apparatus according to claim 1, wherein in a case

that a first original sheet is to be read after said light source is turned on, said

controller controls said image sensor to scan said second reference member

illuminated by said light source for acquiring shading correction data in the main

scanning direction before start of read of the original sheet.

9. (**previously presented**): The apparatus according to claim 8, wherein in a case

that the first original sheet is to be read after said light source is turned on, and the

predetermined time has not elapsed, said controller skips controlling said image

sensor to scan said first reference member illuminated by said light source for

acquiring the coefficient for uniformly changing level of the electrical signals.

10. - 14. (**canceled**)

15. (**currently amended**): A control method for an image reading unit having a

light source adapted to illuminate an original sheet, an image sensor adapted to scan

said original sheet and output electrical signals, a feeder capable of successively

supplying a plurality of original sheets to an original original sheet scanning area of

said image sensor, a first reference member which is arranged in the original sheet

scanning area of said image sensor in a sub-scanning direction, and a second reference member which is arranged in an area other than the original scanning area of said image sensor in the sub-scanning direction, comprising:

storing a predetermined time since said light source is turned on until a maximum of electrical signals output from said image sensor at the time said light source is turned on changes a predetermined rate;

measuring an on time since the light source is turned on;

determining whether the measured time reaches the predetermined time;

controlling said image sensor to scan the first reference member illuminated by said light source for acquiring a coefficient for uniformly changing level of the electrical signals while said image sensor scans the plurality of original sheets which are successively supplied by said feeder in a case that the predetermined time has not elapsed; and

controlling said image sensor to interrupt the scanning operation of the plurality of original sheets, scan the second reference member illuminated by said light source only once for acquiring shading correction data in a main scanning direction in a case that the predetermined time has elapsed, then restart scanning of the remaining original sheets and scan said first reference member illuminated by said light source while said image sensor scans the remaining original sheets without scanning said second reference member.

16. (canceled)

17. (**previously presented**): The method according to claim 15, further comprising:

performing shading correction on the electrical signals output from the image sensor.

18. (**original**): The method according to claim 15, wherein the first and second

reference members comprise white plates.

19. (**previously presented**): The method according to claim 18, wherein the first

reference member is arranged at an end portion of a main scanning direction.

20. (**previously presented**): The method according to claim 15, wherein said

determination is performed before each original sheet is read.

21. (**previously presented**): The method according to claim 20, wherein said

determination is performed in a case that the feeder supplies each original sheet to a

predetermined position.

22. (**previously presented**): The method according to claim 15, further comprising

determining whether an original sheet is a first document sheet after the light source

is turned on,

wherein in a case that the original sheet is determined to be the first document sheet, said controlling of said image sensor to scan the second reference member illuminated by said light source is executed before start of read of the

original sheet regardless of a result of determining whether the measured time reaches the predetermined time.

23. (previously presented): The method according to claim 22, wherein in a case that the original sheet is determined to be the first document sheet, said controlling of said image sensor to scan the first reference member illuminated by said light source for acquiring a coefficient for uniformly changing level of the electrical signals is skipped regardless of the result of determining whether the measured time reaches the predetermined time.

24. (canceled)

25. (canceled)

26. (previously presented): An image reading apparatus comprising:

- a light source adapted to illuminate an original sheet;
- an image sensor adapted to scan said original sheet and output electrical signals;
- a feeder capable of successively supplying a plurality of original sheets to an original sheet scanning area of said image sensor;
- a reference member which is arranged in an area other than the original sheet scanning area of said image sensor in a sub-scanning direction;

a memory adapted to store a predetermined time since said light source is turned on until a maximum of electrical signals output from said image sensor at the time said light source is turned on changes a predetermined rate;

a timer adapted to measure an on time since said light source is turned on; and

a controller adapted to determine whether the time measured by said timer reaches the predetermined time and, in a case that the predetermined time has not elapsed, control said image sensor to scan the plurality of original sheets which are successively supplied by said feeder, and, in a case that the predetermined time has elapsed, control said image sensor to interrupt the scanning operation of the plurality of original sheets, scan said reference member illuminated by said light source only once for acquiring shading correction data in a main scanning direction and then restart scanning of the remaining original sheets without scanning said reference member.

27. (previously presented): A control method for an image reading unit having a light source adapted to illuminate an original sheet, an image sensor adapted to scan said original sheet and output electrical signals, a feeder capable of successively supplying a plurality of original sheets to an original sheet scanning area of said image sensor; a reference member which is arranged in an area other than the original sheet scanning area of said image sensor in a sub-scanning direction, comprising:

storing a predetermined time since said light source is turned on until a

maximum of electrical signals output from said image sensor at the time said light source is turned on changes a predetermined rate; measuring an on time since the light source is turned on; determining whether the measured time reaches the predetermined time; and controlling said image sensor to scan the plurality of original sheets which are successively supplied by said feeder in a case that the predetermined time has not elapsed; and

controlling said image sensor to interrupt the scanning operation of the plurality of original sheets, scan the reference member illuminated by said light source only once for acquiring shading correction data and then restart scanning of the remaining original sheets without scanning said reference member, in a case that the predetermined time has elapsed.